

## CLAIMS

1. A disinfection and purification composition, comprising:

- (a) at least one metal selected from the group consisting of the metals in the Periodic Table of the Elements, groups 1b,2b,3b,4b,5b,6b,7b,8,3a,4a, and 5a;
- (b) at least one plant extract; and
- (c) at least one alcohol.

2. A disinfection and purification composition, comprising:

- (a) at least one metal selected from the group consisting of the metals in the Periodic Table of the Elements, groups 1b,2b,3b,4b,5b,6b,7b,8,3a,4a, and 5a; and
- (b) at least one plant extract.

3. A disinfection and purification composition, comprising:

- (a) at least one metal selected from the group consisting of the metals in the Periodic Table of the Elements, groups 1b,2b,3b,4b,5b,6b,7b,8,3a,4a, and 5a; and
- (b) at least one alcohol.

4. The disinfection and purification composition of **CLAIM 1** wherein at least one of the metals selected is copper.

5. The disinfection and purification composition of **CLAIM 1** wherein at least one of the metals selected is silver.

6. The disinfection and purification composition of **CLAIM 2** wherein at least one of the metals selected is copper.

7. The disinfection and purification composition of **CLAIM 2** wherein at least one of the metals selected is silver.

8. The disinfection and purification composition of **CLAIM 3** wherein at least one of the metals selected is copper.

9. The disinfection and purification composition of **CLAIM 3** wherein at least one of the metals selected is silver.

10. The disinfection and purification composition of **CLAIM 1** wherein the metals

selected are copper and silver.

11. The disinfection and purification composition of **CLAIM 2** wherein the metals selected are copper and silver.

12. The disinfection and purification composition of **CLAIM 3** wherein the metals selected are copper and silver.

13. The disinfection and purification composition of **CLAIM 1** wherein the plant extracts are selected from the group consisting of angiosperms.

14. The disinfection and purification composition of **CLAIM 1** wherein the alcohol is glycerol.

15. The disinfection and purification composition of **CLAIM 2** wherein the plant extracts are selected from the group consisting of angiosperms.

16. The disinfection and purification composition of **CLAIM 3** wherein the alcohol is glycerol.

17. The disinfection and purification composition of **CLAIM 1** wherein the plant extract is extracted from grapefruit.

18. The disinfection and purification composition of **CLAIM 2** wherein the plant extract is extracted from grapefruit.

19. A method of manufacturing the disinfection and purification composition of **CLAIM 1** comprising the steps of:

selecting at least one of the metals from the group consisting of the metals in the Periodic Table of the Elements, groups 1b,2b,3b,4b,5b,6b,7b,8,3a,4a, and 5a;

selecting the plant extract;

selecting the alcohol; and

mixing the selected metals together with the selected plant extract and the selected alcohol.

20. A method of manufacturing the disinfection and purification composition of **CLAIM 2** comprising the steps of:

selecting at least one of the metals from the group consisting of the metals in the Periodic Table of the Elements, groups 1b,2b,3b,4b,5b,6b,7b,8,3a,4a, and 5a;

selecting the plant extract; and

mixing the selected metals together with the selected plant extract.

21. A method of manufacturing the disinfection and purification composition of **CLAIM 3** comprising the steps of:

selecting at least one of the metals from the group consisting of the metals in the

5 Periodic Table of the Elements, groups 1b,2b,3b,4b,5b,6b,7b,8,3a,4a, and 5a;

selecting the alcohol; and

mixing the selected metals together with the selected alcohol.

22. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 19** comprising the steps of:

10 infusing the mixture into a user selected item.

23. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 19** comprising the steps of:

applying the mixture onto the surface of a user selected item.

24. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 19** comprising the steps of:

15 dissolving the mixture into a user selected liquid.

25. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 20** comprising the steps of:

infusing the mixture into a user selected item.

20 26. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 20** comprising the steps of:

applying the mixture onto the surface of a user selected item.

27. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 20** comprising the steps of:

25 dissolving the mixture into a user selected liquid.

28. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 21** comprising the steps of:

infusing the mixture into a user selected item.

29. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 21** comprising the steps of:

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applying the mixture onto the surface of a user selected item.

30. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 21** comprising the steps of:

dissolving the mixture into a user selected liquid.

5 31. A method of manufacturing the disinfection and purification composition of **CLAIM 1** comprising the steps of:

selecting at least one of the metals from the group consisting of the metals in the Periodic Table of the Elements, groups 1b,2b,3b,4b,5b,6b,7b,8,3a,4a, and 5a;

selecting the plant extract;

10 selecting the alcohol;

selecting at least one disinfectant compound from the group consisting of ozone, peroxides, halogens from the Periodic Table of the Elements, group 7a, halogenated hydrocarbons, amides, amines, and halogenated dioxides; and

15 mixing the selected metals together with the selected plant extract, the selected alcohol and the selected disinfectant compounds.

32. A method of manufacturing the disinfection and purification composition of **CLAIM 2** comprising the steps of:

selecting at least one of the metals from the group consisting of the metals in the Periodic Table of the Elements, groups 1b,2b,3b,4b,5b,6b,7b,8,3a,4a, and 5a;

20 selecting the plant extract;

selecting at least one disinfectant compound from the group consisting of ozone, peroxides, halogens from the Periodic Table of the Elements, group 7a, halogenated hydrocarbons, amides, amines, and halogenated dioxides; and

25 mixing the selected metals together with the selected plant extract and the selected disinfectant compounds.

33. A method of manufacturing the disinfection and purification composition of **CLAIM 3** comprising the steps of:

selecting at least one of the metals from the group consisting of the metals in the Periodic Table of the Elements, groups 1b,2b,3b,4b,5b,6b,7b,8,3a,4a, and 5a;

30 selecting the alcohol;

selecting at least one disinfectant compound from the group consisting of ozone, peroxides, halogens from the Periodic Table of the Elements, group 7a, halogenated hydrocarbons, amides, amines, and halogenated dioxides; and

mixing the selected metals together with the selected alcohol and the selected disinfectant compounds.

34. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 31** comprising the steps of:

infusing the mixture into a user selected item.

35. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 31** comprising the steps of:

applying the mixture onto the surface of a user selected item.

36. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 31** comprising the steps of:

dissolving the mixture into a user selected liquid.

37. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 32** comprising the steps of:

infusing the mixture into a user selected item.

38. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 32** comprising the steps of:

applying the mixture onto the surface of a user selected item.

39. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 32** comprising the steps of:

dissolving the mixture into a user selected liquid.

40. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 33** comprising the steps of:

infusing the mixture into a user selected item.

41. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 33** comprising the steps of:

applying the mixture onto the surface of a user selected item.

42. A method of using the disinfection and purification composition manufactured by

the method of manufacture of **CLAIM 33** comprising the steps of:

dissolving the mixture into a user selected liquid.

43. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 19** comprising the steps of:

infusing the mixture into a user selected item; and

exposing the mixture infused item to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

44. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 19** comprising the steps of:

applying the mixture onto the surface of a user selected item; and

exposing the mixture applied surface to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

45. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 19** comprising the steps of:

dissolving the mixture into a user selected liquid; and

exposing the liquid dissolved mixture to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

46. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 20** comprising the steps of:

infusing the mixture into a user selected item; and

exposing the mixture infused item to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

47. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 20** comprising the steps of:

applying the mixture onto the surface of a user selected item; and

exposing the mixture applied surface to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

48. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 20** comprising the steps of:

dissolving the mixture into a user selected liquid; and

exposing the liquid dissolved mixture to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

49. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 21** comprising the steps of:

5 infusing the mixture into a user selected item; and  
exposing the mixture infused item to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

50. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 21** comprising the steps of:

10 applying the mixture onto the surface of a user selected item; and  
exposing the mixture applied surface to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

51. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 21** comprising the steps of:

15 dissolving the mixture into a user selected liquid; and  
exposing the liquid dissolved mixture to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

52. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 31** comprising the steps of:

20 infusing the mixture into a user selected item; and  
exposing the mixture infused item to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

53. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 31** comprising the steps of:

25 applying the mixture onto the surface of a user selected item; and  
exposing the mixture applied surface to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

54. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 31** comprising the steps of:

30 dissolving the mixture into a user selected liquid; and

exposing the liquid dissolved mixture to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

55. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 32** comprising the steps of:

5 infusing the mixture into a user selected item; and

exposing the mixture infused item to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

56. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 32** comprising the steps of:

10 applying the mixture onto the surface of a user selected item; and

exposing the mixture applied surface to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

57. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 32** comprising the steps of:

15 dissolving the mixture into a user selected liquid; and

exposing the liquid dissolved mixture to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

58. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 33** comprising the steps of:

20 infusing the mixture into a user selected item; and

exposing the mixture infused item to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

59. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 33** comprising the steps of:

25 applying the mixture onto the surface of a user selected item; and

exposing the mixture applied surface to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

60. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 33** comprising the steps of:

30 dissolving the mixture into a user selected liquid; and



exposing the liquid dissolved mixture to at least one treatment selected from the group consisting of radiation, light, sonic blasts and extremes of temperature.

61. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 19** comprising the steps of:

5 placing the mixture in a filtration device such that a user selected fluid must pass through the filtration device and dissolve the mixture in the user selected fluid.

62. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 20** comprising the steps of:

10 placing the mixture in a filtration device such that a user selected fluid must pass through the filtration device and dissolve the mixture in the user selected fluid.

63. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 21** comprising the steps of:

15 placing the mixture in a filtration device such that a user selected fluid must pass through the filtration device and dissolve the mixture in the user selected fluid.

64. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 31** comprising the steps of:

20 placing the mixture in a filtration device such that a user selected fluid must pass through the filtration device and dissolve the mixture in the user selected fluid.

65. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 32** comprising the steps of:

25 placing the mixture in a filtration device such that a user selected fluid must pass through the filtration device and dissolve the mixture in the user selected fluid.

66. A method of using the disinfection and purification composition manufactured by the method of manufacture of **CLAIM 33** comprising the steps of:

placing the mixture in a filtration device such that a user selected fluid must pass through the filtration device and dissolve the mixture in the user selected fluid.